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EXAMINER	
BOKHARI, SYED M	

ART UNIT	PAPER NUMBER
2473	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/718,692	LEE ET AL.	
	Examiner	Art Unit	
	SYED BOKHARI	2473	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01/11/2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7,9-16 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-7, 9-16 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on January 11th, 2010 has been entered. Claims 1, 7 and 13 have been amended. Claims 1, 3-7, 9-16 and 20 are pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aweva et al. (US 6,894,974 B1) in view of Hann (US 7,088,722 B1) and further in view of Border et al. (US 2002/0071436 A1) and Tam (US 6,622,172 B1).

Aweva et al. disclose a communication system for controlling packet transmission rate to reduce congestion with the following features: regarding claim 1, a communication system comprising a transmitter for transmitting one or more data packets at least one receiver connected to the transmitter for receiving the data packets and transmitting to the transmitter one or more response signals in response to the received data packets (Fig. 1, packet network, see "plurality of network elements" recited in column 4 lines 19-28); a multiplexer for multiplexing and transmitting to the transmitter the response signals transmitted from the receiver and transmitting the transmitted data packets from the transmitter to a corresponding receiver (Fig. 2, network elements, see "multiplexer 50" recited in column 5 lines 53-65); regarding claim 7, a communication system, comprising: at least one transmitter for transmitting one or more data packets; at least one receiver belonging to a private network and connected to the transmitter, for receiving the data packets and transmitting to the transmitter one or more response signals in response to the received data packets (Fig.

1, packet network, see "plurality of network elements" recited in column 4 lines 19-28) and a gateway for arbitrating a communication protocol between the transmitter and the private network (Fig. 2, network elements, see "multiplexer 50" recited in column 5 lines 53-65); regarding claim 13, a communication method in which a receiver receiving data packets from a transmitter transmits to the transmitter response signals corresponding to the data packets, comprising (Fig. 1, packet network, see "plurality of network elements" recited in column 4 lines 19-28).

Aweva et al. do not disclose the following features: regarding claim 1, the multiplexer composed of a queue status monitor, a congestion control adjuster, wherein the queue status monitor monitors a queue status of at least one of the transmitted data packet and the response signals, wherein the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status, wherein the receiver includes a response signal holding/compressing unit for, if instructed by the congestion control adjuster to compress the response signals, compressing the response signals for a second predetermined period of time and wherein the queue status monitor is disposed inside the multiplexer; regarding claim 7, the gateway composed of a queue status monitor, a congestion control adjuster, wherein the queue status monitor monitors a queue status of at least one of the transmitted data packet and the response signals, wherein the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status, wherein the receiver includes a response signal holding/compressing unit for, if instructed by the congestion control adjuster to

compress the response signals, compressing the response signals for a second predetermined period of time and wherein the queue status monitor is disposed inside the multiplexer; regarding claim 13, monitoring a queue status of at least one of the data packets and the response signals, instructing the receiver to compress the response signals based on the monitored queue status and if the congestion control adjuster predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a predetermined period of time, as instructed by the congestion control adjuster.

Hann discloses a communications system for controlling the flow of multiplexed data with the following features: regarding claim 1, the multiplexer composed of a queue status monitor (Fig. 3, a flowchart illustrating a method of controlling the flow of multiplexed data in the digital subscriber line access multiplexer, see "at step 204 FIFOs within DSLAM 30 are continuously monitored for status" recited in column 6 lines 50-54 and column 8 lines 25-27), a congestion control adjuster (Fig. 2, a block diagram illustrating a digital subscriber line access multiplexer 30 of the communication system, see "flow control unit 148 to receive flow control signal and gives directions" recited in column 6 lines 54-56), wherein the queue status monitor monitors a queue status of at least one of the transmitted data packet and the response signals (Fig. 3, a flowchart illustrating a method of controlling the flow of multiplexed data in the digital subscriber line access multiplexer, see "at step 204 FIFOs within DSLAM 30 are continuously monitored for status of data storage capacity" recited in column 8 lines 20-27) and wherein the queue status monitor is disposed inside the multiplexer (Fig. 2, a block

diagram illustrating a digital subscriber line access multiplexer 30 of the communication system, see "flow control unit 148 to receive flow control signal and gives directions" recited in column 6 lines 54-56); regarding claim 7, the gateway composed of a queue status monitor (Fig. 3, a flowchart illustrating a method of controlling the flow of multiplexed data in the digital subscriber line access multiplexer, see "at step 204 FIFOs within DSLAM 30 are continuously monitored for status" recited in column 6 lines 50-54 and column 8 lines 25-27), a congestion control adjuster (Fig. 2, a block diagram illustrating a digital subscriber line access multiplexer 30 of the communication system, see "flow control unit 148 to receive flow control signal and gives directions" recited in column 6 lines 54-56), wherein the queue status monitor monitors a queue status of at least one of the transmitted data packet and the response signals (Fig. 3, a flowchart illustrating a method of controlling the flow of multiplexed data in the digital subscriber line access multiplexer, see "at step 204 FIFOs within DSLAM 30 are continuously monitored for status of data storage capacity" recited in column 8 lines 20-27) and wherein the queue status monitor is disposed inside the multiplexer (Fig. 2, a block diagram illustrating a digital subscriber line access multiplexer 30 of the communication system, see "flow control unit 148 to receive flow control signal and gives directions" recited in column 6 lines 54-56); regarding claim 13, monitoring a queue status of at least one of the data packets and the response signals (Fig. 3, a flowchart illustrating a method of controlling the flow of multiplexed data in the digital subscriber line access multiplexer, see "at step 204 FIFOs within DSLAM 30 are continuously monitored for status of data storage capacity" recited in column 8 lines 20-27).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Aweva et al. by using the features, as taught by Hann, in order to provide the multiplexer composed of a queue status monitor, a congestion control adjuster, wherein the queue status monitor monitors a queue status of at least one of the transmitted data packet and the response signals, wherein the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status, wherein the receiver includes a response signal holding/compressing unit for, if instructed by the congestion control adjuster to compress the response signals, compressing the response signals for a second predetermined period of time, the gateway composed of a queue status monitor, a congestion control adjuster, wherein the queue status monitor monitors a queue status of at least one of the transmitted data packet and the response signals, wherein the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status, wherein the receiver includes a response signal holding/compressing unit for, if instructed by the congestion control adjuster to compress the response signals, compressing the response signals for a second predetermined period of time and wherein the queue status monitor is disposed inside the multiplexer. The motivation is to enhance the functionality of the receiver for avoiding congestion in a cost effective manner.

Aweva et al. and Hann do not disclose the following features: regarding claim 1, wherein the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status, wherein the receiver includes a response

signal holding/compressing unit for, if instructed by the congestion control adjuster to compress the response signals, compressing the response signals for a second predetermined period of time; regarding claim 7, wherein the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status, wherein the receiver includes a response signal holding/compressing unit for, if instructed by the congestion control adjuster to compress the response signals, compressing the response signals for a second predetermined period of time; regarding claim 13, instructing the receiver to compress the response signals based on the monitored queue status and if the congestion control adjuster predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a predetermined period of time, as instructed by the congestion control adjuster.

Border et al. disclose a communication system directed to a method and system for improving performance of a network, and more particularly, to a method and system which performs spoofing to improve network performance with the following features: regarding claim 1, wherein the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status (Fig. 2, a diagram of a PEP end point platform environment, according to an embodiment of the present invention, see "PEP 200, improves network performance by allocating TCP spoofing-related resources, such as buffer space, control blocks, etc., to TCP connections by spoofing to decrease data response time by reducing the number of ACKs which are transmitted by performing local acknowledgement and by acknowledging multiple TCP

connections with a single ACK by performing data compression" recited in paragraph 0069 lines 1-9, paragraph 0070 lines 1-22 and paragraph 0094 lines 1-12); regarding claim 7, wherein the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status (Fig. 2, a diagram of a PEP end point platform environment, according to an embodiment of the present invention, see "PEP 200, improves network performance by allocating TCP spoofing-related resources, such as buffer space, control blocks, etc., to TCP connections by spoofing to decrease data response time by reducing the number of ACKs which are transmitted by performing local acknowledgement and by acknowledging multiple TCP connections with a single ACK by performing data compression" recited in paragraph 0069 lines 1-9, paragraph 0070 lines 1-22 and paragraph 0094 lines 1-12); regarding claim 13, instructing the receiver to compress the response signals based on the monitored queue status (Fig. 2, a diagram of a PEP end point platform environment, according to an embodiment of the present invention, see "PEP 200, improves network performance by allocating TCP spoofing-related resources, such as buffer space, control blocks, etc., to TCP connections by spoofing to decrease data response time by reducing the number of ACKs which are transmitted by performing local acknowledgement and by acknowledging multiple TCP connections with a single ACK by performing data compression" recited in paragraph 0069 lines 1-9, paragraph 0070 lines 1-22 and paragraph 0094 lines 1-12).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Aweva et al. with Hann by using the features, as

taught by Border et al., in order to provide the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status, the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status. The motivation is to enhance the functionality of the receiver for avoiding congestion in a cost effective manner.

Aweva et al., Hann and Border et al. do not disclose the following features: regarding claim 1, wherein the receiver includes a response signal holding/compressing unit for, if the congestion control adjuster predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a predetermined period of time, as instructed by the congestion control adjuster; regarding claim 7, wherein the receiver includes a response signal holding/compressing unit for, if the congestion control adjuster predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a predetermined period of time, as instructed by the congestion control adjuster; regarding claim 13, if a congestion control adjuster disposed between the transmitter and the receiver predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a predetermined period of time as instructed by the congestion control adjuster.

Tam discloses data communication system involving the Transmission Control Protocol (TCP) where acknowledgement transmissions by the receiving entity are dynamically delayed in response to the congestion window size of a sending entity that

is connected to the receiving entity via an asymmetric connection with the following features: regarding claim 1, wherein the receiver includes a response signal holding/compressing unit for, if the congestion control adjuster predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a predetermined period of time, as instructed by the congestion control adjuster (Fig. 1, a high-level block diagram illustrating a network connection between a sender's computer and a receiver's computer, see "invention provide a solution to the congestion problem by dynamically delaying the transmission of acknowledgement packets (hereinafter known as ACKs) by the TCP communication protocol in the receiver's computer when data packets (hereinafter known as DATs) are transmitted by the sender's computer" recited in column 10 lines 1-44 and column 23 lines 39-50); regarding claim 7, wherein the receiver includes a response signal holding/compressing unit for, if the congestion control adjuster predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a predetermined period of time, as instructed by the congestion control adjuster (Fig. 1, a high-level block diagram illustrating a network connection between a sender's computer and a receiver's computer, see "invention provide a solution to the congestion problem by dynamically delaying the transmission of acknowledgement packets (hereinafter known as ACKs) by the TCP communication protocol in the receiver's computer when data packets (hereinafter known as DATs) are transmitted by the sender's computer" recited in column 10 lines 1-44 and column 23 lines 39-50); regarding claim 13, if a congestion control adjuster disposed between the

transmitter and the receiver predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a predetermined period of time as instructed by the congestion control adjuster (Fig. 1, a high-level block diagram illustrating a network connection between a sender's computer and a receiver's computer, see "invention provide a solution to the congestion problem by dynamically delaying the transmission of acknowledgement packets (hereinafter known as ACKs) by the TCP communication protocol in the receiver's computer when data packets (hereinafter known as DATs) are transmitted by the sender's computer" recited in column 10 lines 1-44 and column 23 lines 39-50);

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Aweva et al. with Hann and Border et al. by using the features, as taught by Tam, in order to provide the receiver includes a response signal holding/compressing unit for, if the congestion control adjuster predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a predetermined period of time, as instructed by the congestion control adjuster, the receiver includes a response signal holding/compressing unit for, if the congestion control adjuster predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a predetermined period of time, as instructed by the congestion control adjuster, if a congestion control adjuster disposed between the transmitter and the receiver predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a

predetermined period of time as instructed by the congestion control adjuster. The motivation is to enhance the functionality of the receiver for avoiding congestion in a cost effective manner.

6. Claims 3-5, 9-11, 14-16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aweva et al. (US 6,894,974 B1) in view of Hann (US 7,088,722 B1), Border et al. (US 2002/0071436 A1) and Tam (US 6,622,172 B1) as applied to claims 1, 7, and 13 above, and further in view of Guttman et al. (USP 7,031,259).

Aweva et al. with Hann, Border et al. and Tam discloses the claimed limitations as described in paragraph 5 above. Hann discloses the following features: regarding claim 3, wherein the congestion control adjuster instructs the corresponding receiver to hold the response signals if the queue status of the monitored data packets is over a first threshold (Fig. 2, a block diagram illustrating a digital subscriber line access multiplexer 30 of the communication system, see "the flow control unit 148 directs logic unit 112 to halt transmission of data" recited in column 6 lines 56-60); regarding claim 9, wherein the congestion control adjuster instructs a corresponding receiver to hold the response signals if the queue status of the monitored data packets is over a first threshold (Fig. 2, a block diagram illustrating a digital subscriber line access multiplexer 30 of the communication system, see "the flow control unit 148 directs logic unit 112 to halt transmission of data" recited in column 6 lines 56-60); regarding claim 14, wherein a congestion control adjuster instructs a corresponding receiver to hold the response

signals if the monitored queue status of the data packets is over a first threshold (Fig. 2, a block diagram illustrating a digital subscriber line access multiplexer 30 of the communication system, see "the flow control unit 148 directs logic unit 112 to halt transmission of data" recited in column 6 lines 56-60); regarding claim 20, further comprising a fist-in first-out (FIFO) buffer which outputs one the one or more data packets transmitted from the transmitter and the one or more response signals transmitted from the receivers of (Fig. 2, a block diagram illustrating a digital subscriber line access multiplexer 30 of the communication system, see "FIFO 134 receives the data, stores it and outputs it" recited in column 6 lines 14-30 and lines 50-67).

Aweva et al. with Hann, Border et al. and Tam do not disclose the following features: regarding claim 4, wherein the congestion control adjuster instructs the corresponding receiver to compress the response signals if the queue status of the monitored data packets is under a first threshold and over a second threshold; regarding claim 5, wherein the congestion control adjuster instructs the corresponding receiver to compress the response signals and if the queue status of the monitored data packets is under a first threshold and the queue status of the response signals is over a second threshold; regarding claim 10, wherein the congestion control adjuster instructs a corresponding receiver to compress the response signals if the queue status of the monitored data packets is under a first threshold and over a second threshold; regarding claim 11, wherein the congestion control adjuster instructs a corresponding receiver to compress the response signals if the queue status of the monitored data packets is under a first threshold and the queue status of the response signals is over a

second threshold; regarding claim 15, wherein a congestion control adjuster instructs a corresponding receiver to compress the response signals if the monitored queue status of the data packets is under a first threshold and over a second threshold and regarding claim 16, wherein a congestion control adjuster instructs a corresponding receiver to compress the response signals if the monitored queue status of the data packets is under a first threshold and the monitored queue status of the response signals is over a second threshold.

Guttman et al. discloses a communication system for scheduling of compressible and non-compressible packets with the following features: regarding claim 4, wherein the congestion control adjuster instructs the corresponding receiver to compress the response signals (Fig. 1, scheduling table, see "determining a high bit rate threshold" recited in column 4 lines 37-44) and if the queue status of the monitored data packets is under a first threshold and over a second threshold (Fig. 1, scheduling table, see "determines whether to compress the packet" recited in column 4 lines 44-48); regarding claim 5, wherein the congestion control adjuster instructs the corresponding receiver to compress the response signals (Fig. 1, scheduling table, see "determining to compress" recited in column 3 lines 49-56) and if the queue status of the monitored data packets is under a first threshold and the queue status of the response signals is over a second threshold (Fig. 1, scheduling table, see "high and low thresholds" recited in column 3 lines 45-50); regarding claim 10, wherein the congestion control adjuster instructs a corresponding receiver to compress the response signals (Fig. 1, scheduling table, see "determining a high bit rate threshold" recited in column 4 lines 37-44) and if

the queue status of the monitored data packets is under a first threshold and over a second threshold (Fig. 1, scheduling table, see "determines whether to compress the packet" recited in column 4 lines 44-48); regarding claim 11, wherein the congestion control adjuster instructs a corresponding receiver to compress the response signals (Fig. 1, scheduling table, see "determining to compress" recited in column 3 lines 49-56) and if the queue status of the monitored data packets is under a first threshold and the queue status of the response signals is over a second threshold (Fig. 1, scheduling table, see "high and low thresholds" recited in column 3 lines 45-50); regarding claim 15, wherein a congestion control adjuster instructs a corresponding receiver to compress the response signals (Fig. 1, scheduling table, see "determining a high bit rate threshold" recited in column 4 lines 37-44) and if the monitored queue status of the data packets is under a first threshold and over a second threshold (Fig. 1, scheduling table, see "determines whether to compress the packet" recited in column 4 lines 44-48) and regarding claim 16, wherein a congestion control adjuster instructs a corresponding receiver to compress the response signals (Fig. 1, scheduling table, see "determining to compress" recited in column 3 lines 49-56) and if the monitored queue status of the data packets is under a first threshold and the monitored queue status of the response signals is over a second threshold(Fig. 1, scheduling table, see "high and low thresholds" recited in column 3 lines 45-50);

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Aweva et al. with Hann, Border et al. and Tam by using the features, as taught by Guttman et al., in order to provide the congestion

control adjuster instructs the corresponding receiver to compress the response signals if the queue status of the monitored data packets is under a first threshold and over a second threshold, the congestion control adjuster instructs the corresponding receiver to compress the response signals and if the queue status of the monitored data packets is under a first threshold and the queue status of the response signals is over a second threshold. The motivation is to enhance the functionality of the receiver for avoiding congestion in a cost effective manner.

7. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aweva et al. (US 6,894,974 B1) in view of Hann (US 7,088,722 B1), Border et al. (US 2002/0071436 A1) and Tam (US 6,622,172 B1) as applied to claims 1, 7 and 13 above, and further in view of Norrell et al. (USP 6,853,637 B1).

Aweva et al., Hann, Border et al. and Tam describe the claimed limitations as discussed in paragraph 5 above. Aweva et al., Hann, Border et al. and Tam do not disclose the following features: regarding claim 6, wherein the transmitter transmits the data packets at a first transmission rate exceeding 6 Mbps, and the receiver transmits the response signals at a second transmission rate under 900 Kbps and regarding claim 12, wherein the transmitter transmits the data packets at a first transmission rate exceeding 6 Mbps, and the receiver transmits the response signals at a second transmission rate under 900 Kbps.

Norrell et al. disclose a local shared communication medium with the following features: regarding claim 6, wherein the transmitter transmits the data packets at a first transmission rate exceeding 6 Mbps, and the receiver transmits the response signals at a second transmission rate under 900 Kbps (Fig. 1, communication system, see "ADSL supports up to 6 Mbps" recited in column 2 lines 15-32 in background of the invention) and regarding claim 12, wherein the transmitter transmits the data packets at a first transmission rate exceeding 6 Mbps, and the receiver transmits the response signals at a second transmission rate under 900 Kbps (Fig. 1, communication system, see "ADSL supports up to 6 Mbps" recited in column 2 lines 15-32 in background of the invention).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Aweva et al. with Hann, Border et al. and Tam by using the features, as taught Norrell et al., in order to provide the transmitter transmits the data packets at a first transmission rate exceeding 6 Mbps, and the receiver transmits the response signals at a second transmission rate under 900 Kbps, the transmitter transmits the data packets at a first transmission rate exceeding 6 Mbps, and the receiver transmits the response signals at a second transmission rate under 900 Kbps. The motivation of using these functions is to enhance the system in a cost effective manner.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 3-7, 9-16 and 20 have been considered but are moot in view of the new ground(s) of rejection. Applicant states in

the remarks regarding claim 1, "On page 5 of the Office Action, the Examiner states that the congestion control adjuster recited in claim 1 of the present invention corresponds to the flow control unit 148 recited in col. 6, lines 54-56 and Fig. 2 of Hann. Additionally, on page 17 of the Office Action, the Examiner points out that "the Q monitor is not claimed as inside the MUX." Claim 1 now recites "wherein the queue status monitor is disposed inside the multiplexer," which Applicants submit is not taught in the cited art. In Aweva, the ACK pacing control unit 38 comprises the Q monitor which is disposed therein and separated from the MUX 50 (see FIG. 2) Thus, it is possible to derive that the queue status monitor is disposed outside the MUX 50 of Aweva. Accordingly, it would not be obvious to one of skill in the art that the queue status monitor is disposed inside the MUX 50 of Aweva". Examiner respectfully disagrees. Prior teaches that the monitor is disposed inside the DSLAM of Aweva" as illustrated in figures 1 and 2. Figure 1 is a schematic representation of a network employing a network element configured with an apparatus according to a first embodiment of the invention whereas the figure 2 is a schematic block diagram of the network element and apparatus according to the first embodiment of the invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SYED BOKHARI whose telephone number is (571)270-3115. The examiner can normally be reached on Monday through Friday 8:00-17:00 Hrs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang B. Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Syed Bokhari/
Examiner, Art Unit 2473
3/26/2010

/KWANG B. YAO/
Supervisory Patent Examiner, Art Unit 2473